

ABSTRACT OF THE DISCLOSURE

A radiation image signal is acquired from a radiation image of an object before being injected with a contrast medium, and a radiation image signal is acquired from a radiation image of the same object after being injected with the contrast medium. A subtraction process for subtracting image signal components of a plurality of the thus acquired radiation image signals, which image signal components represent corresponding pixels in the radiation images represented by the plurality of the radiation image signals, from one another is performed. A contrasted radiation image, in which a pattern of a specific structure of the object having been contrasted with the contrast medium in the radiation image has been extracted or enhanced, is thus formed. The contrast medium is a liposome, which contains a hydrophobic iodine compound as a film forming constituent.